Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

- 1-2. (cancelled)
- 3. (previously amended) A process for the removal of DOC from water containing DOC, said process comprising:
 - (i) contacting the water with ion-exchange resin to enable adsorption of DOC on the resin;
 - (ii) separating the resin loaded with DOC from the water;
 - (iii) regenerating at least a portion of the separated resin by contacting it with a concentrated inorganic salt solution containing a source of anions such that the anions exchange with DOC adsorbed on the resin;
 - (iv) separating the regenerated resin from the concentrated salt solution containing DOC;
 - (v) contacting the solution from step (iv) with a coagulant and/or flocculant such that the DOC becomes insoluble in the salt solution; and
 - (vi) removing the insoluble DOC of step (v) from the salt solution.
- (previously amended) A process according to claim 3 wherein the ion exchange resin has a density greater than the water and the resin loaded with DOC is separated from the water by settling.

- 5. (original) A process according to claim 4 wherein the resin is collected by vacuum collection.
- (previously amended) A process according to claim 3 wherein the regenerated resin is separated from the concentrated salt solution containing DOC by filtering through a mesh.
- (previously amended) A process for the removal of DOC from water containing DOC, said process comprising:
 - (i) contacting the water with ion-exchange resin to enable adsorption of DOC on the resin;
 - (ii) separating the resin loaded with DOC from the water;
 - (iii) regenerating at least a portion of the separated resin and recycling the remainder to step (i), wherein the resin is regenerated by contacting it with a concentrated inorganic salt solution containing a source of anions such that the anions exchange with the DOC adsorbed on the resin;
 - (iv) separating the regenerated resin from the concentrated inorganic salt solution containing DOC;
 - (v) recycling the regenerated resin back to step (i);
 - (vi) contacting the separated inorganic salt solution from step (iv) with a coagulant and/or flocculant such that the DOC becomes insoluble in the salt solution;
 - (vii) removing insoluble DOC from the salt solution to regenerate concentrated inorganic salt solution; and
 - (viii) recycling concentrated inorganic salt solution back to step (iii).

- 8. (previously amended) A process according to claim 3 which is used in the treatment of a raw water source to produce potable water for distribution and consumption.
- 9. (original) A process according to claim 7 wherein the regenerated salt solution obtained from step (vii) is treated with a base.
- 10. (original) A process according to claim 7 wherein the regenerated concentrated salt solution is obtained from step (vii) has a pH of 7-II.
- 11. (previously amended) A process according to claim 3 wherein the ionexchange resin is magnetic ion-exchange resin.
- 12. (original) A process according to claim 11 wherein the magnetic ionexchange is MIEX® resin.
- 13. (previously amended) A process according to claim 3 wherein the coagulant/flocculant is selected from aluminium sulphate (alum), polyaluminum chloride, aluminium chlorohydrate, polyaluminium chlorohydrate, ferric chloride, ferric sulphate, polymerised ferric sulphate, polyDADMACS, polyacrylamide emulsion polymers, coagulant aids, and filter aids.
- 14. (previously amended) A process according to claim 13 wherein the coagulant/flocculant is selected from Ferric Chloride, Ferric Sulphate, polymerised Ferric sulphate and Aluminium sulphate (Alum).
- 15. (previously amended) A process according to claim 3 wherein the concentrated salt solution is a concentrated inorganic salt solution selected from NaCl, KCl, NH₄Cl, CaCl₂ and MgCl₂ or mixtures thereof.
- 16. (original) A process according to claim 15 wherein the concentrated salt solution is a brine solution.

- 17. (previously amended) A process according to claim 15 wherein the salt solution has a concentration of greater than 1.5M, or 100 grams of total dissolved salt in a mixture of salts per litre of water.
- 18. (previously amended) A process according to claim 3 wherein the step of contacting the salt solution with a coagulant and/or flocculant is conducted under acidic conditions.
- 19. (original) A process according to claim 18 wherein the pH is less than 3.
- 20. (previously amended) A process according claim 3 wherein the step of contacting the salt solution with a coagulant and/or flocculant further includes the addition of an acid.
- 21. (original) A process according to claim 20 wherein the acid is selected from HCI, HNO₃ and H₂SO₄.
- 22. (original) A process according to claim 21 wherein the acid is HCI.
- 23. (previously amended) A process according to claim 20 wherein the pH is about 2.
- 24. (previously amended) A process according to claim 3 wherein the insoluble DOC is removed from the salt solution by filtration.
- 25. (original) A process according to claim 24 wherein the filtration method is a plate and frame filter process.
- 26. (previously amended) A process according to claim 3 wherein the DOC which is removed from the salt solution is used as a fertilizer, feed-stock, soil conditioner, or health supplement.
- 27. (previously amended) A process according to claim 3 wherein the DOC which is removed from the salt solution is used as land fill.

28. (cancelled)